



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/054,990	01/25/2002	Sunao Tabata	016907-1367	7746
22428	7590	05/17/2006	EXAMINER	
FOLEY AND LARDNER LLP SUITE 500 3000 K STREET NW WASHINGTON, DC 20007			MENBERU, BENIYAM	
		ART UNIT	PAPER NUMBER	
		2625		

DATE MAILED: 05/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/054,990	TABATA ET AL.
	Examiner	Art Unit
	Beniyam Menberu	2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 22 March 2006.  
 2a) This action is FINAL.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-25 is/are pending in the application.  
 4a) Of the above claim(s) 4-6, 9, 13-15 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-3, 7, 8, 10-12 and 16-25 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 17 May 2002 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_

5) Notice of Informal Patent Application (PTO-152)  
 6) Other: \_\_\_\_\_

***Response to Restriction Election***

1. Applicant's election with traverse of Group I in the reply filed on March 22, 2006 is acknowledged.

The applicant did not state any grounds for traversal.

The requirement is still deemed proper and is therefore made FINAL.

***Drawings***

2. The drawings are objected to because in Figure 11 when  $RGB_{average} > K$  and  $S4 < k < S5$  the output is  $RGB_{average}$  but in Figure 9 the selector 53 will output the average of  $RGB_{average}$  and  $K$ . Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date

of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 7, 10, 16, 19, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5999644 to Sugiura in view of U.S. Patent No. 7006708 to Nako et al.

Regarding claims 1, 7, and 10, Sugiura disclose an image processing apparatus comprising:

a image pickup element which picks up an image and outputs a color image signal (column 4, lines 19-54);

a controlling section which outputs a signal that selects a color image output or a monochrome image output (column 4, lines 55-67; column 5, lines 1-19); and

a converting section which receives an input of the color image signal from the image

pickup element, and in the case where the color image output is selected by the signal from the controlling section, outputs the color image signal (Figure 3a, reference 312 outputs color data to color compression unit 313 (column 4, lines 65-67; column 5, lines 1-5).), and in the case where the monochrome image output is selected, converts the color image signal into the monochrome image signal so as to output the monochrome image signal (Figure 3a, output of reference 314 (column 4, lines 65-67; column 5, lines 1-22).). However Sugiura does not disclose image processing apparatus which adaptively converts the color image signal into the monochrome image signal on the basis of a characteristic nature of the image so as to output the monochrome image signal.

Nako et al disclose image processing apparatus which adaptively converts the color image signal into the monochrome image signal on the basis of a characteristic nature of the image so as to output the monochrome image signal (column 23, lines 8-19, lines 39-67; column 24, lines 18-67; column 25, lines 1-20).

Sugiura and Nako et al are combinable because they are in the similar problem area of image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the monochrome conversion of Nako et al with the color image processing of Sugiura to implement color/monochrome conversion based on the characteristic of image.

The motivation to combine the reference is clear because Nako et al discloses of color/monochrome conversion to produce a naturally monochrome image (column 1, lines 49-55; column 5, lines 57-61)

Regarding claims 16, 19, and 23, Sugiura in view of Nako et al teach all the limitations of claims 1, 7, and 10 respectively. Further Sugiura discloses the image processing apparatus according to claim 1, further comprising a printer that prints out image data from the group consisting of the color image signal and the monochrome image signal (column 5, lines 42-67).

5. Claims 2; 3, 8, 11, 12, 17, 18, 20, 21, 22, 24, and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP405207306A to Miyaza et al in view of U.S. Patent No. 5999644 to Sugiura further in view of U.S. Patent No. 5357354 to Matsunawa et al.

Regarding claims 2, 8, and 11 Miyaza et al disclose an image processing apparatus comprising:  
a image pickup element which picks up an image and outputs a color image signal and a monochrome image signal (paragraph 7-9). However Miyaza et al does not disclose a controlling section which outputs a signal that selects a color image output or a monochrome image output; and  
a converting section which receives an input of the color image signal from the image pickup element, and in the case where the color image output is selected by the signal from the controlling section, outputs the color image signal, and in the case where the monochrome image output is selected, and outputs the monochrome image signal that

can be acquired by converting the monochrome image signal and the color image signal on the basis of a characteristic nature of the image.

Sugiura discloses a controlling section which outputs a signal that selects a color image output or a monochrome image output (column 4, lines 55-67; column 5, lines 1-19); and

a converting section which receives an input of the color image signal from the image pickup element, and in the case where the color image output is selected by the signal from the controlling section, outputs the color image signal (Figure 3a, reference 312 outputs color data to color compression unit 313 (column 4, lines 65-67; column 5, lines 1-5).).

Matsunawa et al discloses outputting the monochrome image signal that can be acquired by converting the monochrome image signal (column 12, lines 14-19) and the color image signal (column 11, lines 19-21; column 12, lines 8-13) on the basis of a characteristic nature of the image (column 12, lines 6-65; column 16, lines 45-54).

Miyaza et al, Sugiura, and Matsunawa et al are combinable because they are in the similar problem area of image processing.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to combine the color/monochrome image outputting of Sugiura and the monochrome image outputting of Matsunawa et al with the image system of Miyaza et al to implement monochrome output based on color and monochrome signal.

The motivation to combine the reference is clear because it would be convenient to output both color and monochrome images using the system of Sugiura and

Matsunawa et al provides an easy method for adjusting color balance (column 2, lines 21-35).

Regarding claims 3, 12, and 21, Miyaza et al in view of Sugiura further in view of Matsunawa et al teach all the limitations of claims 2, 8, and 11 respectively. Further Matsunawa et al disclose an image processing apparatus according to claim 2, wherein the converting section corrects a concentration level of the monochrome image signal by using the color image signal when the monochrome image is output (column 12, lines 8-20, lines 36-48).

Regarding claims 17, 20, and 24 Miyaza et al in view of Sugiura further in view of Nako et al teach all the limitations of claims 2, 8, and 11 respectively. Further Sugiura discloses the image processing apparatus according to claim 2, further comprising a printer that prints out image data from the group consisting of the color image signal and the monochrome image signal (column 5, lines 42-67).

Regarding claims 18, 22, and 25, Miyaza et al in view of Sugiura further in view of Matsunawa et al teach all the limitations of claims 3, 21, and 12 respectively. Further Matsunawa et al disclose the image processing apparatus according to claim 3, wherein the concentration level is a specific density area of the monochrome image signal (column 12, lines 24-27, lines 36-42).

***Other Prior Art Cited***

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 6765703 to Watanabe disclose method/apparatus for sensing of color data.

U.S. Patent No. 6762863 to Minakuti et al discloses film scanner.

U.S. Patent No. 6115150 to Nakamura et al disclose image processor.

U.S. Patent Application Publication Pub. No. US 2005/0243347 A1 to Hayaishi disclose color to monochrome conversion.

U.S. Patent Application Publication Pub. No. US 2004/0257621 A1 to Ishihara discloses image processing with chromatic and image property testing.

U.S. Patent Application Publication Pub. No. US 2004/0156076 A1 to Togami et al disclose image processor with transmission capability.

U.S. Patent Application Publication Pub. No. US 2005/0219661 A1 to Hirabayashi disclose imaging apparatus with color conversion.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Beniyam Menberu whose telephone number is (571) 272-7465. The examiner can normally be reached on 8:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kimberly Williams can be reached on (571) 272-7471. The fax phone

number for the organization where this application or proceeding is assigned is **571-273-8300**.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the customer service office whose telephone number is (571) 272-2600. The group receptionist number for TC 2600 is (571) 272-2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov/>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

**Patent Examiner**  
Beniyam Menberu  
BM  
05/15/2006

